

Portable Dictator**BM-21****BM-23****Operating Instructions**

Before operating the unit, please read this manual thoroughly and retain it for future reference.

The instructions in this manual are for 2 models. The model shown in the illustrations is BM-23. Any differences in operation are clearly indicated in the text, for example, "BM-23 only".

Owner's Record

The model number is located at the bottom and the serial number is located inside the cassette holder. Record these numbers in the spaces provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. BM-

Serial No. _____

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WARNING

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

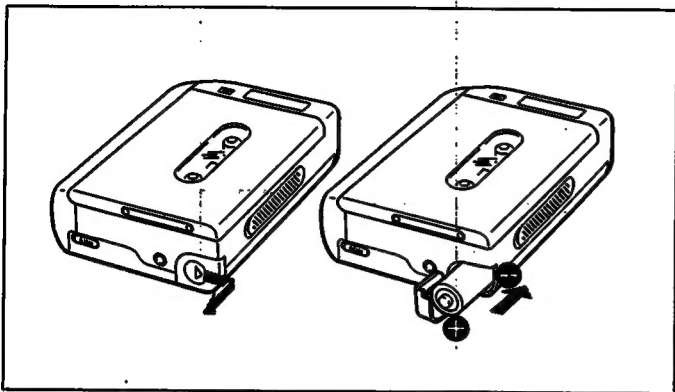
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Preparing a Power Source

Choose one of the following three power sources.

Dry Batteries



- 1 Open the battery compartment lid.
- 2 Insert two size AA (R6) batteries (not supplied) with correct polarity and close the lid.

When to replace the batteries

Replace both batteries with new ones when the DICT/BATT (dictation/battery) indicator becomes faint and the sound is distorted.

For BM-23 only

You can check the approximate battery condition with the battery indication (BATT) displayed while using the dictator.

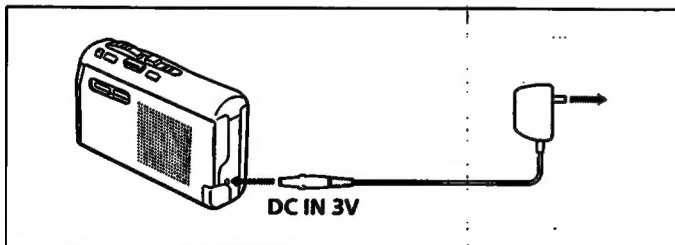
Battery life (Approx. hours)

	Sony alkaline AM3(N)	Sony SUM-3(NS)
Dictating	12	3

Notes

- When replacing the batteries, all the indications in the LCD display light up in a moment and the tape counter will return to "000".
- If the unit is not to be used for a long period of time or is to be operated extensively with other power sources, remove the batteries to avoid damage caused by battery leakage and corrosion.

House Current



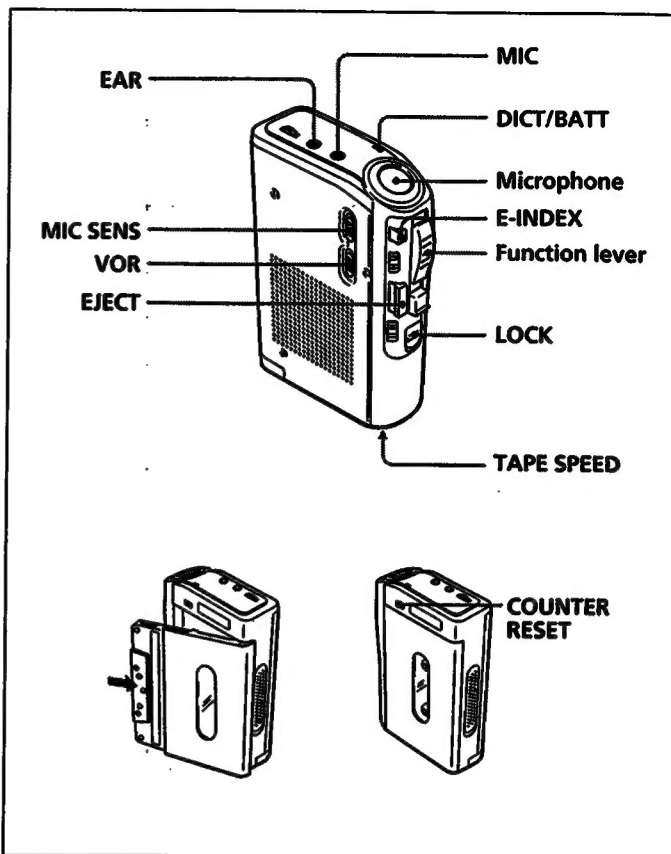
Use the AC-E30M power adaptor (not supplied). First connect the adaptor to the DC IN 3V jack, then to a wall outlet.



Car Battery

Use the DCC-E130L car battery cord (not supplied).

Dictating



Before operating, make sure the following points.

- The LOCK switch is set to the opposite direction of the arrow.
- Nothing is connected to the MIC (microphone) jack.
- Set the VOR (voice operated recording) switch to ON, if necessary.

- 1 Press EJECT to open the cassette compartment lid.
- 2 Insert a cassette with the side to start dictating facing the lid.
- 3 BM-23 only: Set the TAPE SPEED selector to the desired tape speed.

Recording time*	Set to
60 minutes	4.8 cm**
120 minutes	2.4 cm

* Using both sides of a DC-60 cassette.

** For optimum sound (recommended for normal use), set to 4.8 cm.

- 4 Set the MIC SENS (microphone sensitivity) selector to the desired position.

Use for	Set to
normal use	DICT (dictation)

recording a conference or telephone conversation CONF (conference)

- 5 Slide up the function lever to DICT (dictation).
- 6 Speak into the microphone. The DICT/BATT indicator flashes during recording.
- 7 To stop dictating, slide down the function lever to STOP. To eject a cassette, press EJECT.

Note

Do not use a CrO₂ (TYPE II) or metal (TYPE IV) tape, otherwise the sound may be distorted when you play back the tape, or the previous recording may not be erased completely.

To economize the tapes and batteries

Set the VOR switch to ON. The tape moves only when sound is picked up, and stops automatically when sound is no longer detected (DICT/BATT indicator goes out.), thus the minimum amount of tape is used.

To index the tape contents

Press COUNTER RESET before you start dictating. "000" appears in the LCD display.

To monitor the recording

Connect an earphone to the EAR (earphone) jack.

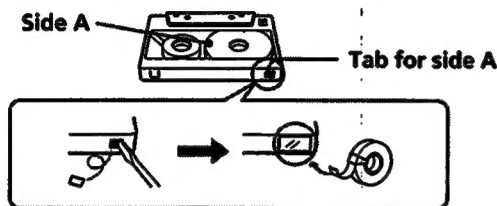
To listen to the just-recorded contents while dictating

Slide down the function lever to BACK SPACE, and release it at the desired point.

When the tape reaches the end and DICT/BATT indicator goes out

Slide the function lever to STOP.

To prevent a tape from being accidentally erased



Break off the cassette tabs from side A and/or B. To reuse the tape for recording, cover the tab hole with adhesive tape.

To erase the entire tape contents

Use the BE-9H cassette eraser (not supplied).

Recording with an external microphone

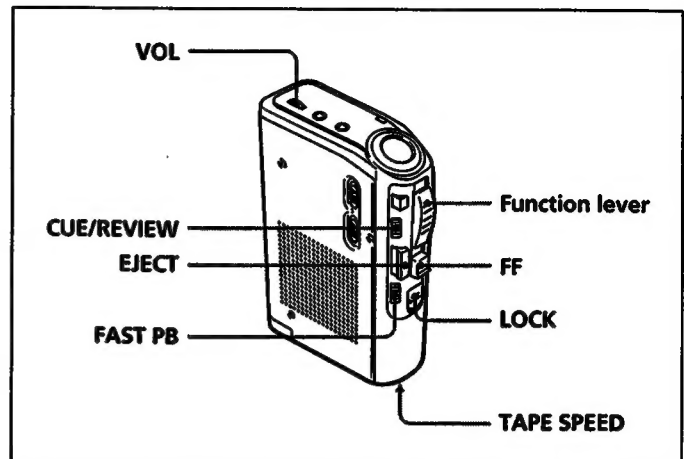
Connect the microphone to the MIC jack. When connecting the electret condenser microphone with "plug-in power" system, the power of the microphone is supplied from this unit.

Putting Marks during Recording for Easy Access (BM-23 only)

Press E-INDEX lightly when you have special instructions for your secretary about the material or mark the end of the letter. An electronic index signal will be recorded on the tape while the letter L (=LTR) appears in the LCD display. When the recording ends, stop the tape after the "L" indication disappears.

This signal is the same as the LTR signal of the Sony transcriber. When your secretary uses the Sony transcriber equipped with auto-stop function, the tape automatically stops at each index signal when it is rewound or rapidly advanced. Your secretary will be able to search a necessary dictation easily.

Listening to the Dictation



Make sure that the LOCK switch is set to the opposite direction of the arrow.

- 1 Press EJECT, then insert a cassette with the side to start listening facing the lid.
- 2 BM-23 only: Set the TAPE SPEED selector to the same position as that in recording.
- 3 Slide down the function lever to LISTEN.
- 4 Adjust VOL (volume).
- 5 To stop playback, slide up the function lever to STOP.

To listen to the tape at a faster speed than normal

Slide FAST PB (fast playback) up while listening to the tape.

To rewind the tape

Slide down the function lever at the BACK SPACE and release it at the desired point.

To rapidly advance the tape

Set the function lever to STOP, then keep pressing FF (fast forward) and release it at the desired point.

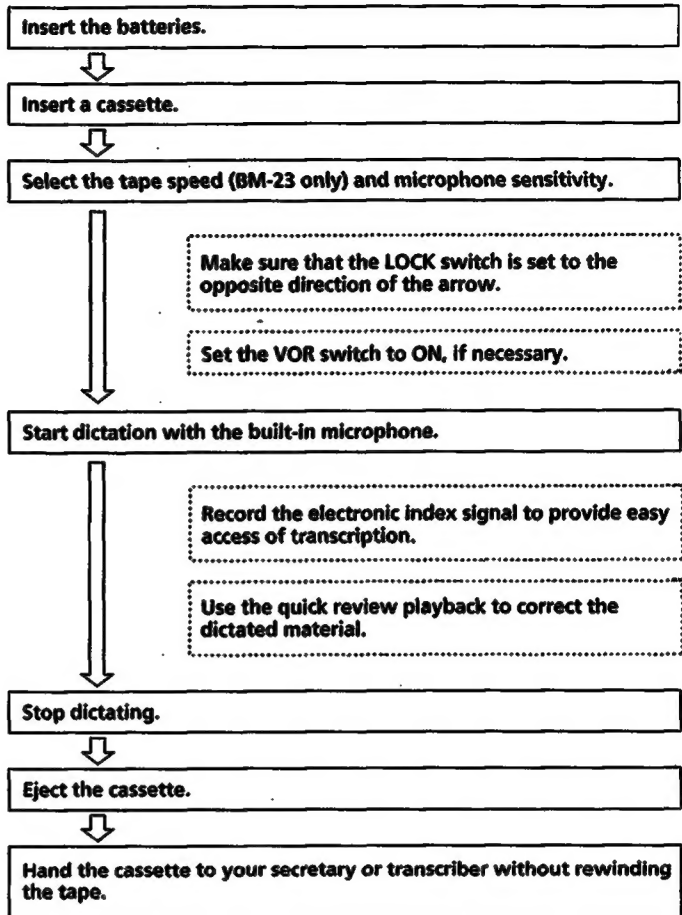
Searching an index signal or a desired portion (BM-23 only)

Set the CUE/REVIEW switch to ON. You can hear the recording including an index signal rapidly in the fast forward or rewind (back space) mode. A beep tone (index signal) will make it easier to access at that position. When it is not necessary to hear the recording including an index signal, set the CUE/REVIEW switch to OFF.

Searching a desired portion (BM-21 only)

Set the CUE/REVIEW switch to ON. You can hear the recording rapidly in the fast forward or rewind (back space) mode. When it is not necessary to hear the recording, set the CUE/REVIEW switch to OFF.

Operation Flow Chart



Tips for Efficient Dictation

Before you start dictation

- Organize your thoughts.
- Make notes or an outline of what you want to dictate.

When you dictate

- Identify yourself. (Name, department, phone number)
- Indicate type of dictation. (Memo, letter, etc.)
- Give transcribing instructions. (Type of stationery, number of copies and who they are for, envelopes, etc.)
- Specify distribution. (Names, address, etc.)

During dictation

- Relax and speak clearly at a normal speed.
- Short sentences are best.
- Include punctuation.
- Spell difficult or unusual words.
- Correct your mistakes. (Review and redictate.)
- At the end of each document, record an electronic index signal. (BM-23 only)

When carrying the unit in a bag or briefcase

Set the LOCK switch to the direction of the arrow to prevent accidental starting of the unit.

When the switch is set to the direction of the arrow, the indication in the LCD display goes out to save batteries.

Troubleshooting

Should any problem persist after you have made these checks, consult your nearest Sony dealer.

The unit does not operate.

- The LOCK switch is set to the direction of the arrow.

Cassette cannot be inserted.

- You attempt to insert the cassette improperly.

The function lever cannot be set to DICT.

- No cassette in the cassette compartment.
- The cassette tab has been removed.

The tape does not move.

- The tape reaches its end. (DICT/BATT indicator goes out.)
- The function lever is set to STOP.
- Battery polarity is incorrect.
- Battery operation is attempted while the AC power adaptor or the car battery cord is still connected to the DC IN 3V jack.
- The AC adaptor or car battery cord is not firmly connected.
- The VOR switch is set to ON in recording.

No sound is heard from the speaker.

- The earphone is plugged in.
- VOL is turned down completely.

Tape speed is excessively fast or slow during playback.

- The TAPE SPEED selector is not set correctly. (BM-23 only)
- FAST PB switch is set to the upper position. (In fast playback mode, tape runs faster than normal.)

A recording cannot be made or is unsatisfactory.

- Batteries are weak.
- The heads are dirty. See *Maintenance*.

Sound drop-outs, loss of high frequency sounds, or excessive noise.

- The heads are dirty.

Unsatisfactory erasing.

- Dirty erase head.

Specifications

Track system

4-track 2-channel monaural

Tape

Normal position type

Tape speeds

BM-23: 4.8 cm/sec. (1 7/8 ips), 2.4 cm/sec. (1 1/2 ips)
BM-21: 4.8 cm/sec. (1 7/8 ips)

Speaker

Approx. 3.6 cm (1 1/2 inches) dia.

Frequency response

200 - 8,000 Hz at 4.8 cm/sec.

Input

Microphone input jack [PLUG IN POWER] (minijack)
Sensitivity 0.3 mV for 3 kilohms or lower impedance

Output

Earphone jack (minijack) for 8-ohm earphone or load impedance
10 kilohms or higher

Battery life

See *Preparing a Power Source*

Power output

240 mW (at 10 % harmonic distortion)

Power requirements

- Two size AA (R6) batteries (not supplied): 3V DC
- Sony AC-E30M power adaptor (not supplied): 120V AC, 60 Hz
- Sony DCC-E130L car battery cord (not supplied): 12 V car battery

Dimensions (w/h/d)

Approx. 88.1 x 129.2 x 32.3 mm (3 1/2 x 5 1/8 x 1 1/4 in.)
incl. projecting parts and controls

Mass

Approx. 300 g (10 oz) incl. batteries

Supplied accessory

Carrying case (1) (BM-23 only)

Design and specifications subject to change without notice.

Accessories not supplied

AC power adaptor AC-E30M
Car battery cord DCC-E130L
Electret condenser microphone
ECM-T150, ECM-T140

Cassette eraser BE-9H
Message coupler TL-2
Telephone recording adaptor TL-4

Your dealer may not handle some of the above listed optional accessories.
Please ask the dealer for detailed information.

Features

- Simple operation with a slide-type function lever.
- You can put electronic indexing marks on recording and also monitor the marked position easily in the fast forward or rewind mode. (BM-23 only)
- Tape speed of either 4.8cm/sec or 2.4cm/sec can be selected with the speed selector. (BM-23 only)
- Battery indicator in the LCD display. (BM-23 only)
- VOR (Voice Operated Recording) system starts and stops recording automatically in response to the sound, and thus saves tapes and batteries.
- Three-digit tape counter in the LCD display for indexing the tape contents.
- FAST PB (fast playback) function that lets you listen to the tape with high speed.
- LOCK switch prevents the unit from accidental operation.
- 3-way powering system: batteries, AC house current and car battery.

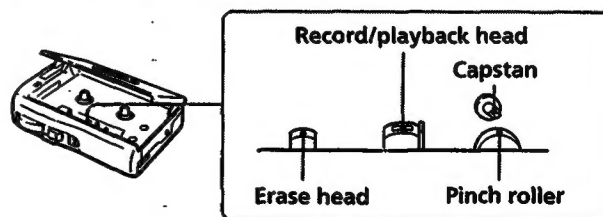
Precautions

- Do not open the casing. Refer servicing to qualified personnel only.
- Operate the unit only on 3 V DC.
For AC operation, use the AC power adaptor recommended for this unit. Do not use any other AC power adaptor.
For car battery operation, use the car battery cord recommended for this unit. Do not use any other car battery cord.
- The nameplate indicating operating voltage, etc. is located on the bottom exterior.
- Disconnect the AC power adaptor from the wall outlet when the unit is not to be used for an extended period of time.
- Do not place the unit in a location near heat sources such as radiators or airducts, or in a place subject to direct sunlight, excessive dust, moisture, rain, mechanical vibration, or shock.
- Should any liquid or solid object fall into the unit, remove the batteries and disconnect the AC power adaptor or the car battery cord, and have the unit checked by qualified personnel before operating it any further.
- Since a strong magnet is used for the speaker, metallic objects such as pins, etc. may cling to the unit. Keep personal credit cards using magnetic coding or spring-wound watches away from the unit to prevent possible damage from the magnet.

If you have any questions or problems concerning your unit that is not covered in this manual, please consult your nearest Sony dealer.

Maintenance

To clean the tape heads and path



Wipe the heads, pinch roller and the capstan with a cotton swab moistened with alcohol every 10 hours of use.

To clean the exterior

Use a soft cloth slightly moistened in water. Do not use alcohol, benzine or thinner.